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Notice of Allowability

Application No.

10/826,196

Examiner

Daniel C. Crane

Applicant(s)

EDIN, MARK

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview conducted on July 7, 2006.
2. ☒ The allowed claim(s) is/are 1-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date Hereto.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Jeremy G. Laabs on July 7, 2006.

IN THE CLAIMS

1. (Currently amended) A method of reducing the diameter of a stent ~~medical device~~ in cross-section, the method comprising the steps of:

- 1) providing an apparatus for applying an inward force to said stent ~~medical device~~, the apparatus comprising a first body portion, a second body portion and a plurality of movable blades arranged to form an aperture whose size may be varied, at least one blade pivotally attached to the first body portion and slidably engaged with the second body portion, wherein at least two blades overlap one another in a direction parallel to a central longitudinal axis of the aperture;
- 2) disposing said stent ~~a medical device~~ within the aperture; and
- 3) reducing the size of the aperture to apply an inward force to said stent ~~medical device~~, thereby reducing the diameter of the stent ~~medical device~~.

2. (Currently amended) The method of claim 1, wherein the ~~medical device is a~~ stent is self-expanding.

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3. (Previously presented) The method of claim 1, wherein the first body portion of the apparatus comprises a mount and the second body portion comprises a collar; each blade being pivotally attached to the mount and slidably engaged with the collar.

4. (Original) The method of claim 3, wherein the size of the aperture is reduced by rotating the collar with respect to the mount.

5. (Original) The method of claim 4, wherein the collar may be rotated with respect to the mount by a drive device.

6. (Previously presented) A method of reducing the diameter of a medical device in cross-section, the method comprising the steps of:

- 1) providing an apparatus for applying an inward force to said medical device, the apparatus comprising a mount, a collar and a plurality of movable blades arranged to form an aperture whose size may be varied by rotating the collar with respect to the mount, each blade being pivotally attached to the mount and slidably engaged with the collar, at least two blades overlapping in a direction parallel to a central longitudinal axis of the aperture, wherein the collar may be rotated with respect to the mount by a drive device comprising a lead screw, a ball screw, a solenoid, a movable rack actuator, a stepper motor or combination thereof;
- 2) disposing a medical device within the aperture; and
- 3) reducing the size of the aperture to apply an inward force to said medical device, thereby reducing the diameter of the medical device.

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7. (Currently amended) The method of claim 1, the apparatus further comprising a second plurality of movable blades arranged to form a second aperture whose size may be varied, the method further comprising reducing the size of the second aperture to apply an inward force to said stent ~~medical device~~, thereby reducing the diameter of the stent ~~medical device~~.

8. (Currently amended) The method of claim 7, ~~the medical device comprising a stent~~, the stent comprising at least one serpentine band having a length component in a direction parallel to a longitudinal axis of the stent, wherein the distance between the aperture and the second aperture is less than the length component of the serpentine band.

9. (Original) The method of claim 8, wherein the plurality of blades and the second plurality of blades are arranged to contact the same serpentine band.

10. (Currently amended) The method of claim 1, wherein each blade comprises a contacting surface that may contact the stent ~~medical device~~, the contacting surface of at least one blade being curved.

11. (Original) The method of claim 1, wherein the blades have a thickness of about 0.025 mm to about 0.075 mm in a direction parallel to the central longitudinal axis of the aperture.

12. (Original) The method of claim 1, wherein the blades have a thickness of about 0.01

mm to about 2 mm in a direction parallel to the central longitudinal axis of the aperture.

13. (Previously presented) An apparatus for applying an inward force to a medical device, said apparatus comprising a plurality of coupled movable blades arranged to form an aperture whose size may be varied, the aperture having a central longitudinal axis, the blades including a first blade and a second blade, each blade comprising a contacting surface for contacting the medical device, the first blade overlapping the second blade in a direction parallel to the central longitudinal axis of the aperture, each blade having a thickness dimension in a direction parallel to the central longitudinal axis of the aperture, wherein a circumference of the aperture oriented orthogonal to the central longitudinal axis contacts the contacting surface of the first blade and the contacting surface of the second blade.

14. (Previously presented) The apparatus of claim 13, wherein the contacting surface of each blade is curved.

15. (Previously presented) The apparatus of claim 13, wherein the thickness dimension of each blade is 2 mm or less.

16. (Original) The apparatus of claim 13, each blade having a thickness dimension of about 0.025 mm to about 0.075 mm.

17. (Original) The apparatus of claim 13, wherein each blade is arranged to pivot about a

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pivot point.

18. (Original) The apparatus of claim 13 comprising 6 to 10 blades.

19. (Currently amended) An apparatus for applying an inward force to a medical device, the apparatus comprising a first body portion, a second body portion and at least three ~~a plurality of~~ coupled movable blades arranged to form an aperture whose size may be varied, each blade pivotally connected to the first body portion and slidably engaged with the second body portion, wherein at least two blades overlap one another in a direction parallel to a central longitudinal axis of the aperture.

20. (Original) The apparatus of claim 19, wherein each blade may overlap a portion of a first adjacent blade and each blade may be overlapped by a portion of a second adjacent blade in a direction parallel to the central longitudinal axis of the aperture.

21. (Original) The apparatus of claim 19, wherein each blade further comprises a contacting surface for contacting a medical device placed within the aperture, wherein the contacting surface of each blade is curved.

22. (Currently amended) The apparatus of claim 19, comprising at least four ~~three~~ blades.

23. (Previously presented) The apparatus of claim 19, wherein the size of the aperture

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is controlled by the rotational orientation of the second body portion with respect to the first body portion.

24. (Previously presented) An apparatus for applying an inward force to a medical device, the apparatus comprising a mount, a rotatable collar and plurality of coupled movable blades arranged to form an aperture of variable size, each blade pivotally connected to the mount and slidably engaged with the rotatable collar, the size of the aperture being controlled by the rotational orientation of the rotatable collar with respect to the mount, wherein at least two blades overlap one another in a direction parallel to a central longitudinal axis of the aperture;

wherein each blade further comprises a pivot pin; the mount further comprises a plurality of apertures; and each aperture receives the pivot pin of a blade.

25. (Previously presented) The apparatus of claim 24, wherein each blade further comprises a sliding pin; the second body portion further comprises a plurality of slots; and each slot receives the sliding pin of a blade.

26. (Previously presented) The apparatus of claim 25, wherein the slots of the second body portion are oriented in a radial direction.

27. (Previously presented) The apparatus of claim 26, wherein the sliding pin of a blade may translocate from a first position to a second position within a slot of the second body portion as the second body portion is rotated from a first rotational position to a

second rotational position with respect to the first body portion.

28. (Original) The apparatus of claim 19, wherein each blade has a thickness dimension in a direction parallel to the central longitudinal axis of the aperture, wherein the thickness dimension of each blade is 2 mm or less.

29. (Original) The apparatus of claim 19 comprising 6 to 10 blades.

30. (Previously presented) An apparatus for applying an inward force to a medical device, the apparatus comprising a plurality of coupled movable blades arranged to form a first aperture of variable size, wherein at least two blades overlap one another in a direction parallel to a central longitudinal axis of the aperture; the apparatus further comprising a second plurality of blades arranged to form a second aperture whose size may be varied, the second aperture adjustable independently from the first aperture.

31. (Original) The apparatus of claim 30, further comprising a third plurality of blades arranged to form a third aperture whose size may be varied, the third aperture being independently adjustable.

32. (Original) The apparatus of claim 30, further comprising a first drive device for controlling the size of the first aperture and a second drive device for controlling the size of the second aperture.

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33. (Previously presented) An apparatus for applying an inward force to a medical device, the apparatus comprising a mount, a rotatable collar and a plurality of coupled movable blades arranged to form an aperture of variable size, each blade pivotally connected to the mount and slidably engaged with the rotatable collar, wherein at least two blades overlap one another in a direction parallel to a central longitudinal axis of the aperture;

wherein the mount, the rotatable collar and the plurality of blades comprise a first crimping section; the apparatus further comprising a second crimping section, the second crimping section comprising a second rotatable collar and a second plurality of blades arranged to form a second aperture, each crimping section being independently adjustable.

34. (Original) The apparatus of claim 33, wherein the first aperture and the second aperture are arranged about a similar central longitudinal axis.

35. (Original) An apparatus for applying an inward force to a medical device, said apparatus comprising a mount, a rotatable collar and a plurality of coupled movable blades arranged to form an aperture whose size may be varied by rotating the collar with respect to the mount; each blade being pivotally attached to the mount and slidably engaged with the collar; each blade having a thickness dimension of 2 mm or less in a direction parallel to a central longitudinal axis of the aperture; wherein at least two blades overlap one another in a direction parallel to the central longitudinal axis of the aperture.

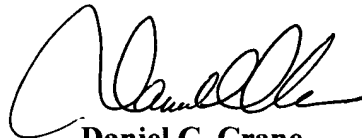
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INQUIRIES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is **(571) 272-4516**. The examiner's office hours are 6:30 AM – 5:00 PM, Tuesday through Friday. The examiner's supervisor, Mr. Derris Banks, can be reached at **(571) 272-4419**.

Documents related to the instant application may be submitted directly by facsimile transmission at all times. The Examiner's Fax number is **(571) 273-4516**. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is **not** to be considered as an official response. The Office Facsimile Center number is **(571) 273-8300**.

DCCrane
July 8, 2006



Daniel C. Crane
Primary Patent Examiner
Group Art Unit 3725